

Translation

PATENT COOPERATION TREATY

PCT/JP2003/010695



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FNSK0308PCT	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/JP2003/010695	International filing date (day/month/year) 25 August 2003 (25.08.2003)	Priority date (day/month/year) 26 August 2002 (26.08.2002)
International Patent Classification (IPC) or national classification and IPC G01L 3/10, B62D 5/04		
Applicant NSK LTD.		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>4</u> sheets, as follows: <div style="margin-left: 40px;"><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</div> b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <div style="margin-left: 20px;"><input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input checked="" type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application</div>

Date of submission of the demand 28 January 2004 (28.01.2004)	Date of completion of this report 01 October 2004 (01.10.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/010695

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ The international application as originally filed/furnished

- ☒ the description:
- pages _____ 1-3, 5-10 _____, as originally filed/furnished
- pages* _____ 4-4/1 _____ received by this Authority on _____ 18 June 2004 (18.06.2004)
- pages* _____ received by this Authority on _____

- ☒ the claims:
- pages _____ 1, 3, 5 _____, as originally filed/furnished
- pages* _____, as amended (together with any statement) under Article 19
- pages* _____ 6-8 _____ received by this Authority on _____ 28 January 2004 (28.01.2004)
- pages* _____ 2, 4 _____ received by this Authority on _____ 18 June 2004 (18.06.2004)

- ☒ the drawings:
- pages _____ 1-11 _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____

- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP 03/10695

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-8	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-8	NO
Industrial applicability (IA)	Claims	1-8	YES
	Claims		NO

2. Citations and explanations

Document 1: JP 10-78358 A (Nippon Seiko Kabushiki Kaisha), 24 March 1998, paragraphs [0009], [0019], [0027] and [0055], and fig. 1, 3 and 11, & US 5796014 A, column 4, lines 54-57; column 6, lines 27-34; column 8, lines 23-28; and column 13, lines 28-44, and fig. 1, 3 and 11

Document 2: JP 2572319 Y2 (Unisia Jecs Corp.), 20 May 1998, entire text, all drawings

The invention that is set forth in claims 1, 3-4 and 6-8 does not involve an inventive step in the light of document 2 and document 1 cited in the international search report. It is well known that a torque sensor comprising a coil bobbin can be used as the torque sensor in an electric power steering apparatus, as disclosed in document 1; therefore, it would be easy for a person skilled in the art to apply the magnetostrictive torque sensor that is disclosed in document 2 in an electric power steering apparatus. In addition, it would also be easy for a person skilled in the art to configure the configuration disclosed in document 2, wherein locking protrusions (27B) and locking holes (27C) are provided to the abutting surfaces (27A), so that said locking

protrusions and said locking holes are provided to locations on the connecting parts (28) that have terminal pins.

The invention that is set forth in claim 2 does not involve an inventive step in the light of document 2 and document 1 cited in the international search report. Document 2 does not disclose "steps that are formed by means of recesses and protrusions." However, in the light of the "locking holes (27C)" and the "locking protrusions (27B)" that are disclosed therein, document 2 can be said to suggest "steps that are formed by means of recesses and protrusions." Consequently, it would be easy for a person skilled in the art to conceive of employing said configuration.

The invention that is set forth in claim 5 does not involve an inventive step in the light of document 2 and document 1 cited in the international search report. A person skilled in the art could easily conceive of configuring interlocking members which have recessed parts and protruding parts so that the depths of the recesses are greater than the heights of the protrusions.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/010695

Box No. VI Certain documents cited

1. Certain published documents (Rule 70.10)

Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
JP 2003-42862 A	13 February 2003 (13.02.2003)	30 July 2001 (30.07.2001)	
[E, X]			

2. Non-written disclosures (Rule 70.9)

Kind of non-written disclosure	Date of non-written disclosure (day/month/year)	Date of written disclosure referring to non-written disclosure (day/month/year)